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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,104

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EXAMINER

HANCE, ROBERT J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/783,104	Applicant(s) KAHN ET AL.	
	Examiner ROBERT HANCE	Art Unit 4134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13, 15-29 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 5, 14 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Claims 26-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 26-33 define a computer readable carrier with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a computer readable carrier embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 10-13, 19-22, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Testin et al., US Patent No 4,776,038.

As to claim 1 AAPA discloses a method for use in a cable television receiver to switch from a non-module tuning mode to a module tuning mode, the method comprising the steps of: detecting a cable tuning module in the cable television receiver (Paragraph 6)

AAPA fails to disclose acquiring module tuning data responsive to the detection of the cable tuning module; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data. However, in an analogous art, Testin et al. disclose acquiring tuning data and switching between tuning modes responsive to a measurement of the acquired tuning data (col. 1 lines 38-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Testin et al. by only switching to the new module tuning mode when that module is capable of tuning to a predetermined number of channels. The rationale for this modification would have been

to avoid using a tuning mode that does not enable a user to view a predetermined number of channels. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 2 AAPA fails to disclose the method of claim 1, wherein the switching step comprises the steps of: determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels; and switching from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels. However, in an analogous art, Testin et al. discloses determining if the acquired tuning data enables the receiver to tune at least a predetermined number of channels, and switching between tuning modes when the receiver is able to tune at least a predetermined number of channels (col. 1 lines 38-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Testin et al. by only switching to the new module tuning mode when that module is capable of tuning to a predetermined number of channels. The rationale for this modification would have been to avoid using a tuning mode that does not enable a user to view a predetermined number of channels. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their

respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 3 AAPA fails to disclose the method of claim 1, wherein the cable television receiver is configured to tune channels for viewing by a user and wherein the switching step comprises the steps of: determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels; soliciting user input to switch from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels; and switching from the non-module tuning mode to the module tuning mode responsive to the solicited user input.

However, in an analogous art, Testin et al. disclose determining if the acquired tuning data enables the cable television receiver to tune at least a predetermined number of channels (col. 1 lines 38-48); and a keyboard input that allows a user to switch between tuning modes (col. 2 lines 15-18; col. 3 lines 25-31; col. 6 lines 27-30; Fig. 1: 19). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Testin et al. by only switching to the new module tuning mode when that module is capable of tuning to a predetermined number of channels, and by prompting a user to switch between tuning modes and switching between tuning modes responsive to user input. The rationale for this modification would have been to avoid using a tuning mode that does not enable a user to view a predetermined number of channels, and to only switch between tuning modes when a user desires to do so. All the claimed elements were known in the prior

art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 4 AAPA fails to disclose the method of claim 1, wherein the switching step comprises the steps of: calculating a module quality factor based at least in part on a number of channels that may be tuned using the acquired module tuning data; and switching from the non-module tuning mode to the module tuning mode automatically responsive to the module quality factor having a value greater than a threshold value.

However, in an analogous art, Testin et al. discloses determining if the acquired tuning data enables the receiver to tune at least a predetermined number of channels, and switching between tuning modes when the receiver is able to tune at least a predetermined number of channels (col. 1 lines 38-48). One of ordinary skill in the art would readily recognize that the number of channels to which a tuner can tune is a measure of the tuners quality, and is therefore equivalent to a quality factor for the tuner.

As to claims 10-13 see similar rejections to claims 1-4. The apparatus of claims 10-13 corresponds to the method of claims 1-4. Therefore claims 10-13 have been analyzed and rejected.

As to claims 19-22 see similar rejections to claims 1-4. The system of claims 19-22 corresponds to the method of claims 1-4. Therefore claims 19-22 have been analyzed and rejected.

As to claims 26-29 see similar rejections to claims 1-4. The computer readable carrier of claims 26-29 corresponds to the method of claims 1-4. Therefore claims 26-29 have been analyzed and rejected.

3. Claims 6-7, 15-16, 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Testin et al., US Patent No 4,776, and further in view of 038Yun, US Pub No 2001/0006404.

As to claim 6 AAPA fails to disclose the method of claim 1, wherein the acquiring step comprises the step of: acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel; and wherein the switching step comprises the step of: switching from the non-module tuning mode to the module tuning mode responsive to the acquisition of the first instance of each table within the set of critical tables.

However, in an analogous art, Yun discloses acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel (Paragraphs 54-56; Fig. 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Yun. The rationale for this modification would have been to obtain all the necessary information in order for a tuner to be able to acquire cable television signals. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their

respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

AAPA as modified by Yun fail to disclose switching from the non-module tuning mode to the module tuning mode responsive to the acquisition of the first instance of each table within the set of critical tables. However, in an analogous art, Testin et al. disclose acquiring tuning data and switching between tuning modes responsive to a measurement of the acquired tuning data (col. 1 lines 38-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified with the teachings of Testin et al. by only switching to the new module tuning mode when that module has acquired the necessary tables. The rationale for this modification would have been to avoid using a tuning mode that does not enable a user to view a predetermined number of channels. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 7 AAPA fails to disclose the method of claim 6, wherein the step of acquiring the first instance of each table within the set of critical tables comprises the steps of: acquiring a Carrier Definition Sub-table, the Carrier Definition Sub-table defining actual frequencies of one or more channels; acquiring a Modulation Mode Sub-table, the Modulation Mode Sub-table defining modulation schemes for the one or more channels; acquiring a Defined Channels Map table, the Defined Channels Map defining

one or more virtual channels for use by the cable television receiver when in the module tuning mode; and acquiring a Virtual Channels Map table, the Virtual Channels Map table identifying a virtual channel record for each of the defined virtual channels, each virtual channel record identifying an actual frequency defined by the Carrier Definition Sub-table and a modulation scheme defined by the Modulation Mode Sub-table.

However, in an analogous art, Yun discloses acquiring a Carrier Definition Sub-table, the Carrier Definition Sub-table defining actual frequencies of one or more channels; acquiring a Modulation Mode Sub-table, the Modulation Mode Sub-table defining modulation schemes for the one or more channels; acquiring a Defined Channels Map table, the Defined Channels Map defining one or more virtual channels for use by the cable television receiver when in the module tuning mode; and acquiring a Virtual Channels Map table, the Virtual Channels Map table identifying a virtual channel record for each of the defined virtual channels, each virtual channel record identifying an actual frequency defined by the Carrier Definition Sub-table and a modulation scheme defined by the Modulation Mode Sub-table (Paragraphs 54-56; Fig. 8).

As to claims 15-16 see similar rejection to claims 6-7. The apparatus of claims 15-16 corresponds to the method of claims 6-7. Therefore claims 15-16 have been analyzed and rejected.

As to claim 23 see similar rejection to claim 6. The system of claim 23 corresponds to the method of claim 6. Therefore claim 23 has been analyzed and rejected.

As to claim 31 see similar rejection to claim 6. The computer readable carrier of claim 31 corresponds to the method of claim 6. Therefore claim 31 has been analyzed and rejected.

4. Claims 8-9, 17-18, 24-25, 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Testin et al., US Patent No 4,776,038 and further in view of Inui et al., Japanese Pub No JP 2002-344838 A.

As to claim 8 AAPA as modified fail to disclose the method of claim 1, further comprising the step of: presenting a virtual channel reference number corresponding to a currently tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified with the teachings of Inui et al. by displaying the virtual channel number responsive to switching between tuning modes. The rationale for this modification would have been to alert the viewer as to the virtual channel number after a change in tuning modes. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination

would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 9 AAPA as modified fail to disclose the method of claim 1, further comprising the step of: tuning to a virtual channel corresponding to a previously tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified by switching to the virtual channel corresponding to the presently tuned physical channel upon switching from one tuning mode to another. The rationale for this modification would have been to allow the switch from one tuning mode to another to be seamless and transparent to the viewer. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claims 17 and 18 see similar rejections to claims 8-9. The apparatus of claims 17 and 18 correspond to the method of claims 8-9. Therefore claims 17-18 have been analyzed and rejected.

As to claims 24-25 see similar rejections to claims 8-9. The system of claims 24-25 correspond to the method of claims 8-9. Therefore claims 24-25 have been analyzed and rejected.

As to claims 32-33 see similar rejections to claims 8-9. The computer readable carrier of claims 32-33 correspond to the method of claims 8-9. Therefore claims 32-33 have been analyzed and rejected.

Allowable Subject Matter

5. Claims 5, 14 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HANCE whose telephone number is (571)270-5319. The examiner can normally be reached on M-F 8:00am - 5:00am EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LunYi Lao can be reached on (571) 272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT HANCE/
Examiner, Art Unit 4134
/Yogesh K Aggarwal/
Primary Examiner, Art Unit 2622